From: Terry, Robert [Terry.Robert@epa.gov]

10/31/2014 9:46:56 PM Sent: LEE, LILY [LEE.LILY@EPA.GOV] To:

RE: FYI - Confirming Tetra Tech rad review of anomalous soil samples covered pre-2005 onward Subject:

Ok, then I guess the subject can now be considered closed.

----Original Message----

From: LEE, LILY Sent: Friday, October 31, 2014 2:44 PM

To: Chesnutt, John; Tennis, Rachel; Terry, Robert

Subject: FYI - Confirming Tetra Tech rad review of anomalous soil samples covered pre-2005 onward

So this covers the period that all the time periods of work on the parcels transferring now.

Lily Lee Cleanup Project Manager Superfund Division U.S. Environmental Protection Agency, Region 9 75 Hawthorne St. (SFD-8-3) San Francisco, CA 94105 Tel: 415-947-4187, Fax: 415-947-3518 www.epa.gov/region9/superfund

----Original Message----

From: Haran, Catherine M CIV NAVFAC SW [mailto:catherine.haran@navy.mil] Sent: Friday, October 31, 2014 2:36 PM

To: LEE, LILY

Cc: Yantos, Christopher N CTR NAVFACHQ, BRAC PMO; Macchiarella, Thomas L CIV NAVFACHQ, BRAC PMO; Miya, Ryan@DTSC (Ryan.Miya@dtsc.ca.gov); Tsuji, Denise@DTSC (Denise.Tsuji@dtsc.ca.gov); George.Chow@dtsc.ca.gov Subject: FW: Anomalous soil samples - any more info pre-2008?

Hi Lily,

Please see below for responses to your questions from TtEC. Please let me know if this addresses your questions adequately and if any additional information is requested.

v/r,

Catherine Haran, PE LRPM Hunters Point 619.532.0787 catherine.haran@navy.mil

----Original Message----

From: Abkemeier, Erik [mailto:erik.abkemeier@tetratech.com]

Sent: Wednesday, October 29, 2014 12:41 PM

To: Haran, Catherine M CIV NAVFAC SW; Bolt, Andrew

Cc: Montgomery, Shanti; Yantos, Christopher N CTR NAVFACHQ, BRAC PMO; Macchiarella, Thomas L CIV NAVFACHO, BRAĆ PMO; Sláck, Matthew L CIV SEA 04 04N; Edwards, Zacharý L CIV SEA 04 04N Subject: RE: Anomalous soil samples - any more info pre-2008?

Hi Catherine,

I've included answers to the questions:

I looked at the Tetra Tech internal rpt. It only goes back to Jan 1, 2008. Do you know why the investigation did not look at earlier samples?

The investigation involved reviewing all of the data maintained in the TtEC radioanalytical database from mid-2005 to November 2012. This investigation involved various data analytical methods using professional judgment. Due to improvements in the equipment and radioanalytical algorithms, discerning anomalous patterns was more evident in analysis of data collected after January 1, 2008, due to smaller uncertainties in results. Additional focus was spent analyzing data from that period to try to establish a time frame in which anomalous soil sampling may have occurred. That being said, anomalous patterns in gamma spectroscopy results did not appear until mid-2011; therefore, TtEC is confident that the period of mid-2011 to late 2012 contained all anomalous sampling events.

We are reviewing the draft FOSTS for Parcels G, UC-1, UC-2. I looked at the Rad RACR for Parcel G. It shows that Tetra Tech started excavation there in July 2007.

TtEC started excavating in Parcel G in July 2007, and tables containing corresponding analytical results may be provided upon request.

Regarding UC-1 and UC-2, I saw that Tetra Tech did all the work after 1/1/2008, so I assume that those samples were included in the investigation. I just wanted to confirm.

All of the samples from mid-2005 until November 2012 (the time of the investigation) were investigated. As stated above, additional focus was directed at sample results obtained after 1/1/2008. TtEC could have stated (and perhaps should have stated) in the report that the entire database was analyzed from mid-2005 onward; however, the focus was from 1/1/2008 onward. Because similar anomalous sample result patterns were not identified before mid-2011, TtEC is confident that the time period in which anomalous sampling occurred is appropriately bracketed.

I know you are preparing to transfer Parcel D-2 also. Tetra Tech also did the rad removal work there, starting with surveys in 2006. Do you know if Tetra Tech also looked at samples there before 2008?

Yes, see answers above.

Finally, I look forward to hearing back from you about whether or not the April 2014 report is available to the public and about the total number of samples confirmed to be a problem compared to the total number of rad samples collected.

The April 2014 report and previous drafts dating back to November 2012 have been submitted to the NRC and the Navy, and are public documents. From the April 2014 report, 386 samples out of 87,360 appeared anomalous. Note that not all of the 386 samples have been shown to be unrepresentative of the locations from which they were collected.

Please let me know if I can provide any further data, or be of any further assistance.

Thanks! Erik

Erik Abkemeier CHP PE CSP CHMM| Corporate Health Physics Manager Cell: 757.944.0921 erik.abkemeier@tetratech.com

Tetra Tech EC | ESQ 5250 Challedon Drive | Virginia Beach, VA 23462 | www.tetratech.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

3 Think Green - Not every email needs to be printed.

```
> -----Original Message----
From: LEE, LILY [mailto:LEE.LILY@EPA.GOV]
> Sent: Thursday, October 23, 2014 8:34 AM
> To: Yantos, Christopher N CTR NAVFACHO, BRAC PMO
> Cc: Haran, Catherine M CIV NAVFAC SW; Miya, Ryan@DTSC
> Subject: Anomalous soil samples - any more info pre-2008?
> Dear Chris,
> Chris, thank you for the good talk the other day. I have a few more questions. I was not sure who is the best one to answer this, since you were not assigned to Hunters Pt again until recently. So I'm also cc'ing this to Catherine and Ryan in case they know.
> I looked at the Tetra Tech internal rpt. It only goes back to Jan 1, 2008. Do you know why the investigation did not look at earlier samples?
> We are reviewing the draft FOSTS for Parcels G, UC-1, UC-2. I looked at the Rad RACR for Parcel G. It shows that Tetra Tech started excavation there in July 2007.
> House of the Rad RACR for Parcel G. It shows that Tetra Tech started excavation there in July 2007.
```

```
> Regarding UC-1 and UC-2, I saw that Tetra Tech did all the work after 1/1/2008, so I assume that those
samples were included in the investigation. I just wanted to confirm.
> I know you are preparing to transfer Parcel D-2 also. Tetra Tech also did the rad removal work there, starting with surveys in 2006. Do you know if Tetra Tech also looked at samples there before 2008?
> Finally, I look forward to hearing back from you about whether or not the April 2014 report is
available to the public and about the total number of samples confirmed to be a problem compared to the
total number of rad samples collected.
> Thanks for your help!
>
              Lily
> Lily Lee
> Cleanup Project Manager
> Superfund Division
> U.S. Environmental Protection Agency, Region 9
> 75 Hawthorne St. (SFD-8-3)
> San Francisco, CA 94105
> Tel: 415-947-4187, Fax: 415-947-3518
> www.epa.gov/region9/superfund
>
>
```